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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/028,467

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Kirk W. Skeba

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07/14/2006

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EXAMINER

LANIER, BENJAMIN E

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 07/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,467

Applicant(s)

SKEBA, KIRK W.

Examiner

Benjamin E. Lanier

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-10 and 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-10 and 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 June 2006 has been entered.

Response to Amendment

2. The amendment filed 22 June 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The baseband module is to operate under both the first and second radio protocols, wherein the first and second radio protocols are identified, received, certified, and downloaded before being utilized in the baseband module. The specification (Page 9) specifies that the protocols are utilized one at a time (see [0025]), "change/upgrade" a radio protocol). The specification does not disclose utilizing multiple radio protocols at the same time.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

3. Applicant's arguments filed 22 June 2006 have been fully considered but they are not persuasive. Applicant's argument that Watanabe fails to teach or reasonably suggest the baseband module is to operate under both the first and second radio protocols is not persuasive

Art Unit: 2132

because Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions. Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The added material which is not supported by the original disclosure is as follows: The baseband module is to operate under both the first and second radio protocols, wherein the first and second radio protocols are identified, received, certified, and downloaded before being utilized in the baseband module. The specification (Page 9) specifies that the protocols are utilized one at a time (see [0025]), “change/upgrade” a radio protocol). The specification does not disclose utilizing multiple radio protocols at the same time. For the purposes of examination, the claims will be treated as storing multiple radio protocols in the baseband module so that they are singularly usable.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2132

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites, “using a second cryptographic key,” which renders the claim indefinite because a first key has not been defined. For the purposes of examination the claim limitation will be treated as a key used by the manufacturer to authenticate the program.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 4, 5, 7, 16, 17, 19, 23, 24, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe, U.S. Publication 2002/0144134. Referring to claim 4, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of identifying a first and second radio protocol, receiving the first and second radio protocols. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the

limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the limitation of prior to downloading the first and second radio protocols by a vendor, determining whether the first and second radio protocols meet certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of if the first and second radio protocols meet the certification requirements, downloading the first and second radio protocols at a non-volatile memory device coupled to the baseband module. Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions. Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]), which meets the limitation of first and second protocols, and wherein the baseband module is to operate under both the first and second radio protocols.

Referring to claim 5, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining of the first and second radio protocols meeting the certification requirements comprises authenticating the first and second radio protocols using a first cryptographic key stored at the baseband module.

Referring to claim 7, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when

installed ([0010] & [0063]), which meets the limitation of the downloading of the first and second radio protocols comprises writing the first and second radio protocols to the non-volatile memory device via a boot loader program.

Referring to claim 16, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of a receiver to receive and identify a first and second radio protocol. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the limitation of a mechanism to: prior to downloading the first and second radio protocols by a vendor, determining whether the first and second radio protocols meet certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of a non-volatile memory device coupled to the baseband module to accept a download of and store the first and second radio protocols, if the first and second radio protocols meet the certification requirements, wherein the baseband module is to operate under both the first and second radio protocols. Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions.

Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]), which meets the limitation of first and second protocols, and wherein the baseband module is to operate under both the first and second radio protocols.

Referring to claim 17, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining of the first and second radio protocols meeting the certification requirements comprises authenticating the first and second radio protocols using a first cryptographic key stored at the baseband module.

Referring to claim 19, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of the downloading of the first and second radio protocols comprises writing the first and second radio protocols to the non-volatile memory device via a boot loader program.

Referring to claim 23, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of identifying a first and second radio protocol, receiving the first and second radio protocols. Specification changes to radio protocols needs to be authorized by a third party authority such as the FCC ([0002]-[0003] & [0006]) and that the software that implements these changes within the radio system is approved before being distributed ([0008]). The software is distributed from a server ([0056]), which meets the limitation of a vendor. The software is approved by an agency before being stored at the server and distributed to various radios ([0056]), which meets the

limitation of prior to downloading the first and second radio protocols by a vendor, determining whether the first and second radio protocols meet certification requirements of a third party certification authority. When received by the distribution server, the software contains approval by the predetermined agency ([0056]), which meets the limitation of providing guarantees regarding the certification requirements to a relevant authority. The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of if the first and second radio protocols meet the certification requirements, downloading the first and second radio protocols at a non-volatile memory device coupled to the baseband module. Applicant defines the radio protocols as a specific set of technical parameters including operating frequencies, power output, and types of radio frequency emissions. Watanabe discloses that the radio stores multiple software modules that define the transmissions specifications (Figure 2, elements 51 & 52). These modules define transmission power, frequency, and frequency resolution ([0040]), which meets the limitation of first and second protocols, and wherein the baseband module is to operate under both the first and second radio protocols.

Referring to claim 24, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of determining of the first and second radio protocols meeting the certification requirements comprises authenticating the first and second radio protocols using a first cryptographic key stored at the baseband module.

Referring to claim 26, Watanabe discloses that the software is used to reconfigure the radio devices ([0012]). The radio receives the downloaded software and stores the software when installed ([0010] & [0063]), which meets the limitation of the downloading of the first and

Art Unit: 2132

second radio protocols comprises writing the first and second radio protocols to the non-volatile memory device via a boot loader program.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 6, 18, 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Schneier. Referring to claims 6, 18, 25, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]).

Watanabe does not disclose that the software is encrypted using public key encryption techniques. It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the software of Watanabe using public key encryption techniques because it allows for easier key management by allowing for a network of users to communicate without prior arrangements (Schneier, Pages 31-32).

Art Unit: 2132

11. Claims 8, 9, 20, 21, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Mayer, U.S. Patent No. 4,442,486.

Referring to claims 8, 20, 27, Watanabe discloses a radio system wherein software to update the radio protocol is downloaded to the radio device ([0007]-[0009]), which meets the limitation of receiving a radio protocol at a baseband module. A test is conducted to verify the software ([0009]), which meets the limitation of determining whether said radio protocol has been certified by a certification authority. After verification the software is installed ([0010]), which meets the limitation of storing said radio protocol in a non-volatile memory device in said baseband module, if said radio protocol has been certified by said certification authority.

Watanabe does not disclose that this test is based on the manufacturer of the radio devices.

Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the verification step of Watanabe to include manufacturer information in order to enable the device's manufacturer to control what software is running on their devices as taught in Mayer (Col. 1, lines 23-55).

Referring to claims 9, 21, 28, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]), which meets the limitation of authenticating the program using a second cryptographic key stored at the baseband module. Watanabe does not disclose that this test is based on the manufacturer of the radio devices. Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract), which

Art Unit: 2132

meets the limitation of determining whether the boot loader program is approved by the manufacturer. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the verification step of Watanabe to include manufacturer information in order to enable the device's manufacturer to control what software is running on their devices as taught in Mayer (Col. 1, lines 23-55).

12. Claims 10, 22, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, U.S. Publication 2002/0144134, in view of Mayer, U.S. Patent No. 4,442,486 as applied to claims 1, 7, 8, 9, 16, 19, 20, 21, 23, 26, 27, 28 above, and further in view of Schneier. Referring to claims 10, 22, 29, Watanabe discloses that the software is encrypted with information for detecting falsification ([0020]). Mayer discloses a protected programmable apparatus wherein a device, manufactured by a specific manufacturer, is prevented from operating software that is not approved by the manufacturer (Abstract). Watanabe does not disclose that the software is encrypted using public key encryption techniques. It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the software of Watanabe using public key encryption techniques because it allows for easier key management by allowing for a network of users to communicate without prior arrangements (Schneier, Pages 31-32).


Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.

Art Unit: 2132

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Benjamin E. Lanier